

(FILE 'HOME' ENTERED AT 14:13:34 ON 13 DEC 1999)

FILE 'MEDLINE' ENTERED AT 14:15:14 ON 13 DEC 1999

| | |
|-----|---------------------------------------|
| L1 | 3252 S HOMOLOGOUS RECOMBINATION |
| L2 | 123 S GAP REPAIR |
| L3 | 40170 S LIBRAR? |
| L4 | 610822 S VITRO |
| L5 | 0 S L1 AND L2 AND L3 AND L4 |
| L6 | 13 S L1 AND L3 AND L4 |
| L7 | 250742 S VIVO |
| L8 | 17 S L1 AND L3 AND L7 |
| L9 | 29 S L6 OR L8 |
| L10 | 15 S L1 AND L3 AND RESTRICTION ENZYME |
| L11 | 11 S L10 NOT L9 |

L9 ANSWER 1 OF 29 MEDLINE
 TI In **in vivo** construction of cDNA **libraries** for use in the yeast two-hybrid system.

L9 ANSWER 2 OF 29 MEDLINE
 TI Protein evolution by molecular breeding.

L9 ANSWER 3 OF 29 MEDLINE
 TI Structure-function analyses of thrombomodulin by gene-targeting in mice: the cytoplasmic domain is not required for normal fetal development.

L9 ANSWER 4 OF 29 MEDLINE
 TI Construction and analysis of a Streptococcus parasanguis recA mutant: **homologous recombination** is not required for adhesion in an **in vitro** tooth surface model.

L9 ANSWER 5 OF 29 MEDLINE
 TI Targeting and retrofitting pre-existing **libraries** of transposon insertions with FRT and oriV elements for **in-vivo** generation of large quantities of any genomic fragment.

L9 ANSWER 6 OF 29 MEDLINE *Current Biol. (1998 Dec 3) 8(24) 1300-9.*
 TI The univector plasmid-fusion system, a method for rapid construction of recombinant DNA without restriction enzymes.

L9 ANSWER 7 OF 29 MEDLINE
 TI Large-scale identification of virulence genes from Streptococcus pneumoniae.

L9 ANSWER 8 OF 29 MEDLINE
 TI An introduction to the genetics of normal and defective hearing.

L9 ANSWER 9 OF 29 MEDLINE *Gene (June 1998) 212(2) 315-22 ✓*
 TI Recombination trapping: an **in-vivo** approach to recover cDNAs encoded in YACs.

L9 ANSWER 10 OF 29 MEDLINE
 TI Role of rpoS in stress survival and virulence of Vibrio cholerae.

L9 ANSWER 11 OF 29 MEDLINE
 TI Use of an inducible regulatory protein to identify members of a regulon: application to the regulon controlled by the leucine-responsive regulatory protein (Lrp) in Escherichia coli.

L9 ANSWER 12 OF 29 MEDLINE
 TI Cardiotrophin-1 and the role of gp130-dependent signaling pathways in cardiac growth and development.

L9 ANSWER 13 OF 29 MEDLINE
 TI NRF2, a member of the NFE2 family of transcription factors, is not essential for murine erythropoiesis, growth, and development.

L9 ANSWER 14 OF 29 MEDLINE
 TI Expression and loading of recombinant heavy and light chain homopolymers of rat liver ferritin.

L9 ANSWER 15 OF 29 MEDLINE

TI CD40-deficient mice generated by recombination-activating gene-2-deficient blastocyst complementation.

L9 ANSWER 16 OF 29 MEDLINE

TI Molecular cloning and restriction mapping of human lymphotoxin gene.

L9 ANSWER 17 OF 29 MEDLINE

TI Embryonic stem cells lacking a functional inhibitory G-protein subunit (alpha i2) produced by gene targeting of both alleles.

L9 ANSWER 18 OF 29 MEDLINE

TI The proteinase yscA-inhibitor, IA3, gene. Studies of cytoplasmic proteinase inhibitor deficiency on yeast physiology.

L9 ANSWER 19 OF 29 MEDLINE

TI A phosphate group at the cos ends of phage lambda DNA is not a prerequisite for in **vitro** packaging: an alternative method for constructing genomic **libraries** using a new phasmid vector, lambda pGY97.

L9 ANSWER 20 OF 29 MEDLINE

Chase TI The selective isolation of cosmid clones by **homologous recombination** in Escherichia coli--a cosmid clone containing a complex linkage DNA sequence of mouse was isolated.

L9 ANSWER 21 OF 29 MEDLINE

TI Modification and transfer into an embryonal carcinoma cell line of a 360-kilobase human-derived yeast artificial chromosome.

L9 ANSWER 22 OF 29 MEDLINE PNAS (1990 Apr) 87(8) 3166-9

TI Improved genetic selection for screening bacteriophage **libraries** by **homologous recombination** in **vivo**.

L9 ANSWER 23 OF 29 MEDLINE

TI A new cloning system for Bacillus subtilis comprising elements of phage, plasmid and transposon vectors.

L9 ANSWER 24 OF 29 MEDLINE

TI Syrinx 2A: an improved lambda phage vector designed for screening DNA **libraries** by recombination in **vivo**.

L9 ANSWER 25 OF 29 MEDLINE

TI Cloning of the recA gene of Neisseria gonorrhoeae and construction of gonococcal recA mutants.

L9 ANSWER 26 OF 29 MEDLINE

TI Molecular cloning and characterization of the STA2 glucoamylase gene of Saccharomyces diastaticus.

L9 ANSWER 27 OF 29 MEDLINE

TI Isolation of a functional human interleukin 2 gene from a cosmid **library** by recombination in **vivo**.

L9 ANSWER 28 OF 29 MEDLINE

TI Isolation of the SUP45 omnipotent suppressor gene of Saccharomyces cerevisiae and characterization of its gene product.

L9 ANSWER 29 OF 29 MEDLINE

TI Selective isolation of cosmid clones by **homologous recombination** in Escherichia coli.

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(FILE 'USPAT' ENTERED AT 08:59:26 ON 14 SEP 1999)
L1      QUE DNA OR DEOXYRIBONUCL? OR NUCLEIC ACID
L2      QUE IN VIVO
L3      3354 S (TWO (3A) HYBRID) OR (TWO-HYBRID)
L4      QUE ASSAY
L5      QUE LIBRARY
L6      423 S L1 AND L2 AND L3 AND L4 AND L5
L7      QUE VECTOR
L8      2257 S DNA LIBRARY
L9      116 S L6 AND L7 AND L8
L10     98 S TWO HYBRID ASSAY
L11     0 S TWO HYBRID ASSAY/TI
L12     22 S TWO HYBRID AND ASSAY/TI
L13     1365 S CONSTRUCT? AND DNA LIBRARY AND VIVO
L14     1271 S L13 AND ASSAY
L15     0 S (CONSTRUCT? AND DNA LIBRARY AND VIVO)/TI
L16     0 S CONSTRUCT? AND DNA LIBRARY/TI AND VIVO
L17     3 S DNA LIBRARY/TI
L18     137 S L1 AND L4 AND L5 AND L3 AND L8
L19     372 S TWO HYBRID AND ASSAY
L20     2 S TWO HYBRID/TI AND ASSAY

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(FILE 'USPAT' ENTERED AT 10:08:18 ON 14 SEP 1999)

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| L1 | 684 S TWO HYBRID AND (SYSTEM OR ASSAY) |
| L2 | 3773 S (DNA OR NUCLEIC ACID) (3A) LIBRAR? AND CONSTRUC? |
| L3 | 155 S L1 AND L2 |
| L4 | 895 S (DNA OR NUCLEIC ACID) (3A) LIBRAR? (10A) CONSTRUC? |
| L5 | 27 S L1 AND L4 |

au search
12/13/99

(FILE 'HOME' ENTERED AT 12:45:12 ON 13 DEC 1999)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, SCISEARCH' ENTERED AT 12:45:26 ON
13 DEC 1999

 E ZERVOS/AU
L1 90 S E3-E8
L2 48 DUPLICATE REMOVE L1 (42 DUPLICATES REMOVED)
L3 13 S L2 AND DNA
L4 3 S L3 AND VIVO

FILE 'STNGUIDE' ENTERED AT 12:46:56 ON 13 DEC 1999

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, SCISEARCH' ENTERED AT 12:47:45 ON
13 DEC 1999

L5 3 S L2 AND LIBRAR?
L6 1 S L5 NOT L4

L3 ANSWER 1 OF 13 MEDLINE
 TI In vivo construction of cDNA libraries for use in the yeast two-hybrid system.

L3 ANSWER 2 OF 13 MEDLINE
 TI Molecular cloning and characterization of a novel retinoblastoma-binding protein.

L3 ANSWER 3 OF 13 MEDLINE
 TI Isolation and characterization of Nmi, a novel partner of Myc proteins.

L3 ANSWER 4 OF 13 MEDLINE
 TI Mxi2, a mitogen-activated protein kinase that recognizes and phosphorylates Max protein.

L3 ANSWER 5 OF 13 MEDLINE
 TI Murine chromosomal location of five bHLH-Zip transcription factor genes.

L3 ANSWER 6 OF 13 MEDLINE
 TI Mxil, a protein that specifically interacts with Max to bind Myc-Max recognition sites.

L3 ANSWER 7 OF 13 MEDLINE
 TI Mapping of two genes encoding members of a distinct subfamily of MAX interacting proteins: MAD to human chromosome 2 and mouse chromosome 6, and MXI1 to human chromosome 10 and mouse chromosome 19.

L3 ANSWER 8 OF 13 MEDLINE
 TI Mxil, a protein that specifically interacts with Max to bind Myc-Max recognition sites [published erratum appears in Cell 1994 Oct 21;79(2):following 388].

L3 ANSWER 9 OF 13 BIOSIS COPYRIGHT 1999 BIOSIS
 TI Isolation and characterization of a microphthalmia interacting protein that inhibits tyrosinase expression in human melanocytes.

L3 ANSWER 10 OF 13 BIOSIS COPYRIGHT 1999 BIOSIS
 TI Molecular studies on the function of microphthalmia gene and its role in melanogenesis.

L3 ANSWER 11 OF 13 BIOSIS COPYRIGHT 1999 BIOSIS
 TI MAX STIMULATION OF MYC DEPENDENT TRANSCRIPTION IS IT INCREASED **DNA** BINDING OR INCREASED ACTIVATION POTENTIAL?.

L3 ANSWER 12 OF 13 BIOSIS COPYRIGHT 1999 BIOSIS
 TI DETECTION OF A LOW ABUNDANCE MESSENGER RNA FOR A MEMBRANE PROTEIN ASSOCIATED WITH INTER CELLULAR CHANNELS USING SYNTHETIC OLIGO NUCLEOTIDES.

L3 ANSWER 13 OF 13 CAPLUS COPYRIGHT 1999 ACS
 TI In vivo construction of **DNA** libraries

L4 ANSWER 1 OF 3 MEDLINE
 ACCESSION NUMBER: 1999320745 MEDLINE
 DOCUMENT NUMBER: 99320745
 TITLE: In **vivo** construction of cDNA libraries for use in the yeast two-hybrid system.
 AUTHOR: Fusco C; Guidotti E; **Zervos A S**
 CORPORATE SOURCE: Cutaneous Biology Research Center, Massachusetts General Hospital, Harvard Medical School, Charlestown 02129, USA.
 SOURCE: YEAST, (1999 Jun 15) 15 (8) 715-20.
 Journal code: YEA. ISSN: 0749-503X.
 PUB. COUNTRY: ENGLAND: United Kingdom
 Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199911
 ENTRY WEEK: 19991103
 AB We describe a simple and efficient one-step method to make cDNA libraries using homologous recombination in yeast. cDNA from any source, together with a linear vector, is used to transform yeast. Through homologous recombination and gap repair, the cDNA is unidirectionally incorporated into the yeast expression vector in **vivo**. The cDNA-encoded proteins can then be screened for potential protein-protein interactions with a bait already present in the yeast. This method allows rapid construction and screening of cDNA libraries, even from extremely small amounts of mRNA, and can replace the use of conventional cDNA libraries.

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 1999 ACS
 ACCESSION NUMBER: 1999:511265 CAPLUS
 DOCUMENT NUMBER: 131:140467
 TITLE: In **vivo** construction of **DNA** libraries
 INVENTOR(S): **Zervos, Antonis**
 PATENT ASSIGNEE(S): General Hospital Corp., USA
 SOURCE: PCT Int. Appl., 47 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| WO 9940208 | A1 | 19990812 | WO 1999-US2591 | 19990205 |

W: CA, JP

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: US 1998-PV73817 19980205

AB The invention provides methods of prepg. a plurality of nucleic acid insert mols. The invention also provides methods of constructing a **DNA** library in **vivo**. Gap repair cloning using different sizes of overlap of **DNA** sequences between the Mx11 **DNA** and pJG-4.5 yeast vector was demonstrated. A kit allowing the interchangeable use of a **DNA** library in more than one application is also provided. Finally, the invention provides a method for screening subjects for the existence of lesions in a gene encoding a particular protein.